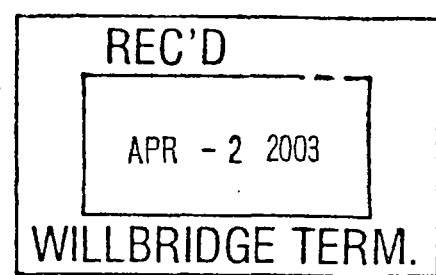


POR SF
11.3.18.1



COPY



February 13, 2003

Oregon Department of Environmental Quality
Northwest Region
2020 SW Fourth Avenue, Suite 400
Portland, Oregon 97201-5884

RE: 2002 Title V Permit Annual Monitoring Report
Permit Number: 26-2028
Kinder Morgan, Linnton and Willbridge Terminals

Dear Northwest Region:

Enclosed please find two copies of the 2002 Title V Annual Monitoring Report for Kinder Morgan, Linnton and Willbridge Terminals. One copy of the report has also been submitted to the Department of Environmental Quality, Air Quality Division, and to the Environmental Protection Agency, Region X office.

If you have any questions, please contact me at (503) 220-1254.

Sincerely,
Kinder Morgan Energy Partners, LP

Peter G. Murphy
Peter G. Murphy
Area Manager

PGM
Enclosure

cc: Oregon Department of Environmental Quality, Air Quality Division
Environmental Protection Agency, Region X



Annual Report--Part A (Revised 1/15/97)

A-1. Facility name/site identifier

Kinder Morgan Energy Partners, LP
Linnton and Willbridge Terminals

A-2. Permit number

26-2028

A-3. Reporting year

2002

A-4. Operating schedule

Not required by permit

- a. Seasonal or year-round?
- b. If seasonal, months of operation.
- c. Annual days in operation.
- d. Annual hours in operation.

A-5. Attach appropriate forms and explanations.

Form R1001-B
Form R1001-C
Form R1002-A
Form R1002-B
Form F1101
Form F1102
Annual Summary of Monthly Parameters

A-6. Certification

Statement of Certification: *Based on information and belief formed after reasonable inquiry, the statements and information in this document and any attachments are true, accurate and complete. I also certify that all statements made concerning compliance, which are based on monitoring required by the permit but not required to be submitted to the Department, are true, accurate and complete based on information and belief formed after reasonable inquiry.*

Mr. Peter G. Murphy

Name of designated responsible official

Area Manager

Title of responsible official

Peter G. Murphy

Signature of responsible official

02/13/03

Date (mm/dd/yy)

Annual Report - Part B (Revised 1/15/97)

FORM R1001-B

Answer Sheet

Page	1
of	6

B-1. Facility name/ site identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID number

OS1

B-4. Pollutant

PM₁₀

B-5. Emissions data:

a. Emissions unit/device ID	b. Method	c. Annual rate	d. Emission Factor	e. Annual Emissions (tons/yr)
EU ID: BOILER				
Willbridge Natural Gas	1	0 10 ⁶ ft ³ /yr	2.5 lbs/10 ⁶ ft ³ natural gas	0
Willbridge Distillate Fuel Oil	1	0 gallons/yr	2 lbs/1,000 gallons fuel oil	0
Willbridge Residual Fuel Oil	1	0 gallons/yr	9.19 X 1.48% S+3.22 lbs/1,000 gal	0
Linnton Distillate Fuel Oil	1	0 gallons/yr	2 lbs/1,000 gallons fuel oil	0
Linnton Residual Fuel Oil	1	0 gallons/yr	9.19 X 1.48% S+3.22 lbs/1,000 gal	0
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				

Annual Report - Part B (Revised 1/15/97)

Page	2
of	6

B-1. Facility name/ site identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID number

OS1

B-4. Pollutant

CO

B-5. Emissions data:

a. Emissions unit/device ID	b. Method	c. Annual rate	d. Emission Factor	Emissions (tons/yr)
EU ID: BOILER				
Willbridge Natural Gas	1	0 10 ⁶ ft ³ /yr	35 lbs/10 ⁶ ft ³ natural gas	0
Willbridge Distillate Fuel Oil	1	0 gallons/yr	5 lbs/1,000 gallons	0
Willbridge Residual Fuel Oil	1	0 gallons/yr	5 lbs/1,000 gallons	0
Linnton Distillate Fuel Oil	1	0 gallons/yr	5 lbs/1,000 gallons	0
Linnton Residual Fuel Oil	1	0 gallons/yr	5 lbs/1,000 gallons	0
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
B-6. POLLUTANT TOTAL				0

Annual Report - Part B (Revised 1/15/97)

FORM R1001-B

Answer Sheet

Page	3
of	6

B-1. Facility name/ site identifier

Kinder Morgan - Linnton Terminal and Willbridge Terminal

B-2. Permit number

26-2028

B-3. Operating scenario ID number

OS1

B-4. Pollutant

NO_x

B-5. Emissions data:

a. Emissions unit/device ID	b. Method	c. Annual rate	d. Emission Factor	Emissions (tons/yr)
EU ID: BOILER				
Willbridge Natural Gas	1	.0 10 ⁶ ft ³ /yr	140 lbs/10 ⁶ ft ³ natural gas	0
Willbridge Distillate Fuel Oil	1	0 gallons/yr	20 lbs/1,000 gallons	0
Willbridge Residual Fuel Oil	1	0 gallons/yr	55 lbs/1,000 gallons	0
Linnton Distillate Fuel Oil	1	0 gallons/yr	20 lbs/1,000 gallons	0
Linnton Residual Fuel Oil	1	0 gallons/yr	55 lbs/1,000 gallons	0
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
B-6. POLLUTANT TOTAL				0

Annual Report - Part B (Revised 1/15/97)

Answer Sheet

Page	4
of	6

B-1. Facility name/ site identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID number

OS1

B-4. Pollutant

SO₂

B-5. Emissions data:

a. Emissions unit/device ID	b. Method	c. Annual rate	d. Emission Factor	Emissions (tons/yr)
EU ID: BOILER				
Willbridge Natural Gas	1	0 10 ⁶ ft ³ /yr	2.6 lbs/10 ⁶ ft ³ natural gas	0
Willbridge Distillate Fuel Oil	1	0 gallons/yr	142 X 1.48% S lbs/1,000 gal	0
Willbridge Residual Fuel Oil	1	0 gallons/yr	157 X 1.48% S lbs/1,000 gal	0
Linnton Distillate Fuel Oil	1	0 gallons/yr	142 X 1.48% S lbs/1,000 gal	0
Linnton Residual Fuel Oil	1	0 gallons/yr	157 X 1.48% S lbs/1,000 gal	0
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
EU ID:				
EU sub-total				0
B-6. POLLUTANT TOTAL				0

Annual Report - Part B (Revised 1/15/97)

Page	5
of	6

identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID
number

OS1

B-4. Pollutant

VOC

B-5. Emissions data:

a. Emissions unit/device ID					b. Method	c. Annual rate	d. Emission Factor	e. Annual Emissions (tons/yr)
EU ID: BOILER								
Willbridge Natural Gas					1	0 10 ⁶ ft ³ /yr	2.8 lbs/10 ⁶ ft ³ natural gas	0
Willbridge Distillate Fuel Oil					1	0 gallons/yr	0.2 lbs/1,000 gallons	0
Willbridge Residual Fuel Oil					1	0 gallons/yr	0.28 lbs/1,000 gallons	0
Linnton Distillate Fuel Oil					1	0 gallons/yr	0.2 lbs/1,000 gallons	0
Linnton Residual Fuel Oil					1	0 gallons/yr	0.28 lbs/1,000 gallons	0
EU sub-total								0
EU ID: FGTVOG								
Willbridge FGTVOG					1	(Refer to GATX spreadsheet for emission unit W-FGTVOG)		6.53
Linnton FGTVOG					1	(Refer to GATX spreadsheet for emission unit L-FGTVOG)		5.90
EU sub-total								12.43
EU ID: TRACK								
Willbridge Gasoline					1	152,971,352 gallons/year	8.34 lbs/10 ³ gals X 99.3% control	4.46
Willbridge Diesel					1	66,688,346 gallons/year	0.023 lbs/10 ³ gals X 99.3% control	0.005
Willbridge Avgas					1	3,004,647 gallons/year	5.78 lbs/10 ³ gals X 99.3% control	0.061
Willbridge Kerosene/Jet					1	14,239,845 gallons/year	0.027 lbs/10 ³ gals X 99.3% control	0.0013
Willbridge Ethanol					1	5,283,521 gallons/year	0.67 lbs/10 ³ gals X 99.3% control	0.012
Linnton Gasoline					1	0 gallons	8.34 lbs/10 ³ gals X 99.7% control	0
Linnton Diesel					1	0 gallons	0.023 lbs/10 ³ gals X 99.7% control	0
Linnton Ethanol					1	0 gallons	0.67 lbs/10 ³ gals X 99.7% control	0
EU sub-total								4.54
EU ID: MLOAD								
Willbridge Gasoline w/VRU					1	129,154,996 gallons/year	3.9 lbs/10 ³ gals X 99.3% control	1.76
Willbridge Kerosene/Jet					1	5,180,790 gallons/year	0.013 lbs/10 ³ gallons	0.034
Willbridge Distillate No. 2					1	58,572,252 gallons/year	0.012 lbs/10 ³ gallons	0.35
Willbridge Residual No. 6					1	0 gallons/year	0.00009 lbs/10 ³ gallons	0
Linnton Kerosene/Jet					1	0 gallons/year	0.013 lbs/10 ³ gallons	0
Linnton Distillate No. 2					1	2,038,008 gallons/year	0.012 lbs/10 ³ gallons	0.012
Linnton Residual No. 6					1	0 gallons/year	0.00009 lbs/10 ³ gallons	0
EU sub-total								2.16

Annual Report - Part B (Revised 1/15/97)

Answer Sheet

Page	6
of	6

identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID
number

OS1

B-4. Pollutant

VOC

B-5. Emissions data:

a. Emissions unit/device ID	b. Method	c. Annual rate	d. Emission Factor	e. Annual Emissions (tons/yr)
EU ID: FIXTANK				
Willbridge Diesel	1	209,837,298 gallons/year	EPA TANKS 3.1	2.21
Willbridge Ethanol	1	0 gallons/year	EPA TANKS 3.1	0
Willbridge Jet	1	164,916,407 gallons/year	EPA TANKS 3.1	2.66
Willbridge Gas RVP7 w/VRU	1	16,061,065 gallons/year	EPA TANKS 3.1 X 99.3% control	0.57
Willbridge Gas RVP10 w/VRU	1	12,153,549 gallons/year	EPA TANKS 3.1 X 99.3% control	0.53
Willbridge Gas RVP13 w/VRU	1	11,831,277 gallons/year	EPA TANKS 3.1 X 99.3% control	0.40
Willbridge Gas RVP15 w/VRU	1	2,947,129 gallons/year	EPA TANKS 3.1 X 99.3% control	0.11
Linnton Diesel	1	22,037,148 gallons/year	EPA TANKS 3.1	0.39
Linnton Ethanol	1	0 gallons/year	EPA TANKS 3.1	0
EU sub-total				6.87
EU ID: EXTANK				
Linnton Gasoline RVP 7	1	4,964,487 gallons/year	EPA TANKS 3.1	2.04
Linnton Gasoline RVP 10	1	1,800,246 gallons/year	EPA TANKS 3.1	1.05
Linnton Gasoline RVP 13	1	2,032,926 gallons/year	EPA TANKS 3.1	2.11
Linnton Gasoline RVP 15	1	107,226 gallons/year	EPA TANKS 3.1	0.91
EU sub-total				6.11
EU ID: INTANK				
Willbridge Gasoline RVP 7	1	147,988,927 gallons/year	EPA TANKS 3.1	3.75
Willbridge Gasoline RVP 10	1	111,984,516 gallons/year	EPA TANKS 3.1	3.76
Willbridge Gasoline RVP 13	1	109,015,058 gallons/year	EPA TANKS 3.1	4.60
Willbridge Gasoline RVP 15	1	68,611,652 gallons/year	EPA TANKS 3.1	3.41
Willbridge Ethanol	1	5,309,021 gallons/year	EPA TANKS 3.1	0.13
Willbridge Avgas	1	3,004,687 gallons/year	EPA TANKS 3.1	0.60
Linnton Gasoline RVP 7	1	435,495 gallons/year	EPA TANKS 3.1	0.08
Linnton Gasoline RVP 10	1	0 gallons/year	EPA TANKS 3.1	0
Linnton Gasoline RVP 13	1	0 gallons/year	EPA TANKS 3.1	0
Linnton Gasoline RVP 15	1	0 gallons/year	EPA TANKS 3.1	0
Linnton Diesel	1	0 gallons/year	EPA TANKS 3.1	0
Linnton Ethanol	1	0 gallons/year	EPA TANKS 3.1	0
EU sub-total				16.33
EU ID:				
EU sub-total				0.00
B-6. POLLUTANT TOTAL				48.44

Annual Report - Part C (Revised 1/15/97)

FORM R1001-C

Answer Sheet

Page
of1
2C-1. Facility name/ site
identifier

Kinder Morgan - Linnton and Willbridge Terminals

C-2. Permit number

26-2028

C-3. Operating scenario ID
number

OS1

C-4. Emissions data--paints/coatings/inks:

a. Emissions unit ID/ material name	b. Annual usage (gal/yr)	c. Density (lbs/gal)	d. VOC Content	e. Control Efficiency	f. waste generated (lbs/yr)	g. Annual Emissions (tons/yr)
EU ID:						
EU sub-total						0
EU ID:						
EU sub-total						0
EU ID:						
EU sub-total						0
EU ID:						
EU sub-total						0
h. Total VOC from paint/coating/ink usage						0

a. Emission unit ID/ material name	b. Annual usage (gal/yr)	c. Density (lbs/gal)	d. VOC Content	e. Control Efficiency	f. waste generated (lbs/yr)	g. solvent recovered (lbs/yr)	h. Annual Emissions (tons/yr)
EU ID: FW							
EU sub-total							0
EU ID:							
EU sub-total							0
EU ID:							
EU sub-total							0
EU ID:							
EU sub-total							0
i. Total VOC Emissions--other solvents							0
C-6. TOTAL VOC EMISSIONS							0

Semi-Annual Compliance Certification—Part A (Revised 1/15/97)

**FORM R1002-A
Answer Sheet**

A-1. Facility name/site identifier

Kinder Morgan Energy Partners, LP
Linnton and Willbridge Terminals

A-2. Permit number

26-2028

A-3. Reporting period [specify]

July 1 – December 31, 2002

A-4. Plan development/revision triggered [yes/no]

No

A-5. Certification

Statement of Certification: *Based on information and belief formed after reasonable inquiry, the statements and information in this document and any attachments are true, accurate and complete. I also certify that all statements made concerning compliance, which are based on monitoring required by the permit but not required to be submitted to the Department, are true, accurate and complete based on information and belief formed after reasonable inquiry.*

Mr. Peter G. Murphy

Name of designated responsible official

Area Manager

Title of responsible official

Peter G. Murphy

Signature of responsible official

02/13/03

Date (mm/dd/yy)

Semi-Annual Compliance Certification - Part B (Revised 1/15/97)

Answer Sheet

Page	1
of	2

B-1. Facility name/site identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID number

OS1

B-4. Compliance status by permit conditions:

a. Permit Condition No.	b. C/I	c. Emissions Unit ID	d. Permit Deviation Type	e. No. of Deviations
3	C			
4	C			
5	C			
6	C			
7	C			
8	C			
9	C			
10	C			
11	C			
12	C			
13	C			
14	C			
15	C			
16	C			
17	C			
18	C			
19	C			
20	C			
21	C			
22	C			
23	C			
24	C			
25	C			
26	C			
27	C			
28	C			
29	C			
30	C			
31	C			
32	C			
33	C			
34	C			
35	C			
36	C			
37	C			
38	C			
39	C			
40	C			
41	C			
42	C			

Semi-Annual Compliance Certification - Part B (Revised 1/15/97)

FORM R1002-B

Answer Sheet

Page	2
of	2

B-1. Facility name/site identifier

Kinder Morgan - Linnton and Willbridge Terminals

B-2. Permit number

26-2028

B-3. Operating scenario ID number

OS1

B-4. Compliance status by permit conditions:


a. Permit Condition No.	b. C/I	c. Emissions Unit ID	d. Permit Deviation Type	e. No. of Deviations
43	C			
44	C			
45	C			
46	C			
47	C			
48	C			
49	C			
50	C			
51	C			
52	C			
53	C			
54	C			
55	C			
56	C			
57	C			
58	C			
G3	C			
G4	C			
G5	C			
G6	C			
G7	C			
G8	C			
G9	C			
G10	C			
G12	C			
G13	C			
G14	C			
G15	C			
G16	C			
G17	C			
G18	C			
G19	C			
G20	C			
G21	C			
G23	C			
G26	C			

1. Facility name Kinder Morgan Linnton and Willbridge Terminal	2. Permit # 26-2028
3.a. 5880 NW St. Helens Road Mailing address	4.a. Pete Murphy, Area Manager Contact name and title
b. Portland, OR 97210 City, State, Zip Code	b. (503) 220-1254 Area code and phone
5. Regulated Air Pollutant	6. Assessable Emissions (tons)
PM ₁₀	8.8
TSP	
SO ₂	104.7
NO _x (as NO ₂)	54.1
TRS (as H ₂ S)	
VOC	322.5
F	
Pb	
HCl	
HAP	
Other	
7. Total Assessable Emissions	490.1

Statement of Certification:

I have reviewed this report and all supporting documentation in their entirety and to the best of my knowledge, information, and belief formed after reasonable inquiry, the statements and information contained herein are true, accurate, and complete.

Mr. Peter G. Murphy
Name of designated responsible official


Signature of responsible official

Area Manager
Title of responsible official

02/13/03
Date(mm/dd/yy)

Total Assessable Emissions: Summary by Emissions Unit
FORM F1102

1. Facility name Kinder Morgan – Linnton and Willbridge Terminals	2. Permit # 26-2028
--	------------------------

3. Emissions Unit ID	4. Device/Process ID/Description	5. Pollutant	6. Total Assessable Emissions (tons)	7. Method	8. Reference
Plant-Wide	Plant-Wide (Boilers)	PM ₁₀	7.8	1	Title V Permit Condition 29
Plant-Wide	Plant-Wide (Boilers)	SO ₂	103.7	1	Title V Permit Condition 29
Plant-Wide	Plant-Wide (Boilers)	NO _x	53.1	1	Title V Permit Condition 29
Plant-Wide	Plant-Wide (Storage tanks, truck loading, marine loading, and other sources)	VOC	321.5	1	Title V Permit Condition 29
Aggregate Insignificant	Plant-Wide	PM ₁₀	1	1	Title V Permit Condition 29
Aggregate Insignificant	Plant-Wide	SO ₂	1	1	Title V Permit Condition 29
Aggregate Insignificant	Plant-Wide	NO _x	1	1	Title V Permit Condition 29
Aggregate Insignificant	Plant-Wide	VOC	1	1	Title V Permit Condition 29

**Kinder Morgan Energy Partners, LP
Linnton and Willbridge Terminals
Title V Operating Permit No. 26-2028
Annual Monitoring Report for 2002
Other Reporting Requirements**

1. Condition 54.g.i. - Name and vapor pressure of product with highest vapor pressure stored in FIXTANK with a capacity greater than 39,000 gallons.

Gasoline: vapor pressure = 5.20 psia
(emissions controlled by Vapor Recovery Unit)

2. Condition 54.g.ii. – If a leak is determined from TRACK inspection, provide a brief summary of inspection results and corrective actions taken.

No gasoline leaks have been detected at TRACK.

3. Condition 54.g.iii. – If opacity violation is noted from visual emission survey on BOILER, provide a summary of visual inspection results.

No opacity violation detected at BOILER.

4. Excess Emissions Upset Log

#2002-1895 – Kinder Morgan notified the DEQ of a spill that occurred at the truck rack on August 7, 2002. Approximately 50 gallons of gasoline was spilled on the concrete due to driver error. The spill was immediately cleaned up.

#02-2849 - Kinder Morgan notified the DEQ of a spill that that happened within the facility on November 26, 2002. A bleader valve was left open after line work and 50 gallons of gasoline was spilled. The spill was immediately cleaned up.

Kinder Morgan, Linnton and Willbridge Terminals
2002 Annual Emissions Summary
All Emission Units

BOILER Emissions	Linnton Terminal Annual Emissions (ton/year)	Willbridge Terminal Annual Emissions (ton/year)	Total Annual Emissions (ton/year)
PM/PM ₁₀	0.00	0.00	0.00
SO ₂	0.00	0.00	0.00
NO _x	0.00	0.00	0.00
CO	0.00	0.00	0.00

VOC Emission Source	Linnton Terminal Annual VOC Emissions (ton/year)	Willbridge Terminal Annual VOC Emissions (ton/year)	Total Annual VOC Emissions (ton/year)
BOILER	0.00	0.00	0.00
TRACK	0.00	4.54	4.54
MLOAD	0.01	2.15	2.16
FGTVOC	5.90	6.53	12.43
FIXTANK, EXTANK, INTANK	6.58	22.74	29.33
Total VOCs	12.50	35.96	48.46

**Kinder Morgan, Linton Terminal
2002 Monthly Emissions Summary
All Emission Units**

BOILER Emissions	January Emissions (tons/month)	February Emissions (tons/month)	March Emissions (tons/month)	April Emissions (tons/month)	May Emissions (tons/month)	June Emissions (tons/month)	July Emissions (tons/month)	August Emissions (tons/month)	September Emissions (tons/month)	October Emissions (tons/month)	November Emissions (tons/month)	December Emissions (tons/month)	Linnton Terminal Annual Emissions (ton/year)
PM/PM ₁₀													0.00
SO ₂													0.00
NO _x													0.00
CO													0.00
VOC													0.00

VOC Emission Source	January Emissions (tons/month)	February Emissions (tons/month)	March Emissions (tons/month)	April Emissions (tons/month)	May Emissions (tons/month)	June Emissions (tons/month)	July Emissions (tons/month)	August Emissions (tons/month)	September Emissions (tons/month)	October Emissions (tons/month)	November Emissions (tons/month)	December Emissions (tons/month)	Linnton Terminal Annual VOC Emissions (ton/year)
TRACK													0.00
MLOAD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01
FGTVOC	0.50	0.45	0.50	0.49	0.50	0.49	0.50	0.50	0.49	0.50	0.49	0.50	5.90
FIXTANK, EXTANK, INTANK	0.00	0.74	0.71	0.67	0.33	0.67	0.42	0.86	0.06	0.48	0.72	0.92	6.58
Total VOCs	0.50	1.20	1.22	1.15	0.83	1.15	0.92	1.37	0.54	0.99	1.20	1.43	12.50

**Kinder Morgan, Willbridge Terminals
2002 Monthly Emissions Summary
All Emission Units**

BOILER Emissions	January Emissions (tons/month)	February Emissions (tons/month)	March Emissions (tons/month)	April Emissions (tons/month)	May Emissions (tons/month)	June Emissions (tons/month)	July Emissions (tons/month)	August Emissions (tons/month)	September Emissions (tons/month)	October Emissions (tons/month)	November Emissions (tons/month)	December Emissions (tons/month)	Willbridge Terminal Annual Emissions (ton/year)
PM/PM ₁₀													0.00
SO ₂													0.00
NO _x													0.00
CO													0.00
VOC													0.00

VOC Emission Source	January Emissions (tons/month)	February Emissions (tons/month)	March Emissions (tons/month)	April Emissions (tons/month)	May Emissions (tons/month)	June Emissions (tons/month)	July Emissions (tons/month)	August Emissions (tons/month)	September Emissions (tons/month)	October Emissions (tons/month)	November Emissions (tons/month)	December Emissions (tons/month)	Willbridge Terminal Annual VOC Emissions (ton/year)
TRACK	0.35	0.37	0.33	0.34	0.37	0.38	0.45	0.44	0.39	0.39	0.39	0.36	4.54
MLOAD	0.14	0.14	0.22	0.18	0.17	0.14	0.27	0.21	0.21	0.15	0.20	0.11	2.15
FGTVOC	0.55	0.50	0.55	0.54	0.55	0.54	0.55	0.55	0.54	0.55	0.54	0.55	6.53
FIXTANK, EXTANK, INTANK	2.08	1.93	2.09	1.64	1.48	1.65	1.82	1.82	2.25	1.85	2.08	2.05	22.74
Total VOCs	3.12	2.94	3.20	2.69	2.58	2.70	3.10	3.02	3.39	2.94	3.20	3.08	35.96

**Kinder Morgan, Linnton Terminal
2002 Monthly Summary
Linnton FIXTANKS**

Month	Diesel Throughput (gallons/month)	Diesel VOC Emissions (tons/month)	Ethanol Throughput (gallons/month)	Ethanol VOC Emissions (tons/month)
January	0	0.00	0	0.00
February	144,858	0.01	0	0.00
March	2,522,184	0.03	0	0.00
April	2,075,136	0.03	0	0.00
May	632,688	0.02	0	0.00
June	0	0.00	0	0.00
July	2,309,958	0.05	0	0.00
August	3,107,160	0.09	0	0.00
September	2,521,638	0.06	0	0.00
October	5,228,580	0.07	0	0.00
November	1,806,000	0.02	0	0.00
December	1,688,946	0.02	0	0.00
Total	22,037,148	0.39	0	0.00

FIXTANKS includes tanks L1033, L2024, L2502, L2503, L5004, L10007, L20011, L30016, L55008, L55021, L55022 and L55023.

Please see detail sheets for throughput and emissions for each tank.

Kinder Morgan, Linnton Terminal
2002 Monthly Summary
Linnton EXTANKS

Month	Gasoline RVP7 Throughput (gallons/month)	Gasoline RVP7 VOC Emissions (tons/month)	Gasoline RVP10 Throughput (gallons/month)	Gasoline RVP10 VOC Emissions (tons/month)	Gasoline RVP13 Throughput (gallons/month)	Gasoline RVP13 VOC Emissions (tons/month)	Gasoline RVP15 Throughput (gallons/month)	Gasoline RVP15 VOC Emissions (tons/month)
January	0	0.00	0	0.00	0	0.00	0	0.00
February	0	0.00	0	0.00	1,472,352	0.74	0	0.00
March	0	0.00	0	0.00	420,924	0.68	0	0.00
April	0	0.00	1,539,636	0.64	0	0.00	0	0.00
May	851,298	0.31	0	0.00	0	0.00	0	0.00
June	1,386,042	0.67	0	0.00	0	0.00	0	0.00
July	167,706	0.37	0	0.00	0	0.00	0	0.00
August	2,559,441	0.69	0	0.00	0	0.00	0	0.00
September	0	0.00	0	0.00	0	0.00	0	0.00
October	0	0.00	260,610	0.41	0	0.00	0	0.00
November	0	0.00	0	0.00	139,650	0.69	0	0.00
December	0	0.00	0	0.00	0	0.00	107,226	0.91
Total	4,964,487	2.04	1,800,246	1.05	2,032,926	2.11	107,226	0.91

EXTANKS includes tanks L45028, and L59029.

Please see detail sheets for throughput and emissions for each tank.

**Kinder Morgan, Linnton Terminal
2002 Monthly Summary
Linnton INTANKS**

Month	Gasoline RVP7 Throughput (gallons/month)	Gasoline RVP7 VOC Emissions (tons/month)	Gasoline RVP10 Throughput (gallons/month)	Gasoline RVP10 VOC Emissions (tons/month)	Gasoline RVP13 Throughput (gallons/month)	Gasoline RVP13 VOC Emissions (tons/month)	Gasoline RVP15 Throughput (gallons/month)	Gasoline RVP15 VOC Emissions (tons/month)	Ethanol Throughput (gallons/month)	Ethanol VOC Emissions (tons/month)	Diesel Throughput (gallons/month)	Diesel VOC Emissions (tons/month)
January	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
February	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
March	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
April	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
May	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
June	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
July	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
August	435,495	0.08	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
September	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
October	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
November	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
December	0	0.00	0	0.00	0	0.00	0	0.00	0	0.000	0	0.000
Total	435,495	0.08	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

INTANKS includes tanks L2501, L11017, L11019, L17018, L17020, and L17027

Please see detail sheets for throughput and emissions for each tank.

Kinder Morgan, Willbridge Terminal
2002 Monthly Summary
Willbridge FIXTANKS

Month	Diesel		Ethanol		Jet A		Gasoline RVP7 w/VRU		Gasoline RVP10 w/VRU		Gasoline RVP13 w/VRU		Gasoline RVP15 w/VRU	
	Throughput (gallons/month)	VOC Emissions (tons/month)	Throughput (gallons/month)	VOC Emissions (tons/month)	Throughput (gallons/month)	VOC Emissions (tons/month)	Throughput (gallons/month)	VOC Emissions (tons/month)	Throughput (gallons/month)	VOC Emissions (tons/month)	Throughput (gallons/month)	VOC Emissions (tons/month)	Throughput (gallons/month)	VOC Emissions (tons/month)
January	14,938,529	0.11	0	0.00	11,995,995	0.13	0	0.00	0	0.00	0	0.00	2,947,129	0.11
February	14,863,254	0.12	0	0.00	13,019,967	0.15	0	0.00	0	0.00	3,267,513	0.11	0	0.00
March	13,623,091	0.12	0	0.00	14,768,670	0.20	0	0.00	0	0.00	4,315,528	0.15	0	0.00
April	9,296,543	0.11	0	0.00	12,471,315	0.21	0	0.00	4,206,862	0.16	0	0.00	0	0.00
May	15,948,358	0.19	0	0.00	12,591,213	0.25	3,658,670	0.12	0	0.00	0	0.00	0	0.00
June	20,410,378	0.25	0	0.00	12,619,231	0.28	3,398,266	0.12	0	0.00	0	0.00	0	0.00
July	18,987,954	0.26	0	0.00	13,948,185	0.33	4,903,069	0.18	0	0.00	0	0.00	0	0.00
August	20,543,509	0.28	0	0.00	15,629,303	0.34	4,101,061	0.15	0	0.00	0	0.00	0	0.00
September	23,376,477	0.27	0	0.00	14,267,381	0.30	0	0.00	4,227,871	0.21	0	0.00	0	0.00
October	20,286,032	0.20	0	0.00	15,360,768	0.15	0	0.00	3,718,816	0.16	0	0.00	0	0.00
November	19,940,132	0.16	0	0.00	14,087,049	0.17	0	0.00	0	0.00	4,248,236	0.14	0	0.00
December	17,623,041	0.13	0	0.00	14,157,330	0.14	0	0.00	0	0.00	0	0.00	0	0.00
Total	209,837,298	2.21	0	0.00	164,916,407	2.66	16,061,065	0.57	12,153,549	0.53	11,831,277	0.40	2,947,129	0.11

FIXTANKS includes tanks W4, W52, W54, W64, W91, W92, W93, W94, W95, W96, W97, W98, W99, W100, W109, W110, W111, W112, W113, W114, W115, W118 and W141.
Please see detail sheets for throughput and emissions for each tank.

Kinder Morgan, Willbridge Terminal
2002 Monthly Summary
Willbridge INTANKS

Month	Gasoline RVP7 Throughput (gallons/month)	Gasoline RVP7 VOC Emissions (tons/month)	Gasoline RVP10 Throughput (gallons/month)	Gasoline RVP10 VOC Emissions (tons/month)	Gasoline RVP13 Throughput (gallons/month)	Gasoline RVP13 VOC Emissions (tons/month)	Gasoline RVP15 Throughput (gallons/month)	Gasoline RVP15 VOC Emissions (tons/month)	Ethanol Throughput (gallons/month)	Ethanol VOC Emissions (tons/month)	Avgas Throughput (gallons/month)	Avgas VOC Emissions (tons/month)
January	0	0.00	0	0.00	0	0.00	27,155,268	1.68	626,638	0.009	36,925	0.04
February	0	0.00	0	0.00	30,107,323	1.49	0	0.00	583,200	0.010	34,415	0.04
March	0	0.00	0	0.00	39,763,883	1.56	0	0.00	178,854	0.009	182,868	0.04
April	0	0.00	38,762,625	1.10	0	0.00	0	0.00	261,704	0.010	227,747	0.05
May	33,711,501	0.86	0	0.00	0	0.00	0	0.00	380,355	0.012	238,683	0.05
June	31,312,102	0.93	0	0.00	0	0.00	0	0.00	346,652	0.013	373,299	0.06
July	45,177,569	0.98	0	0.00	0	0.00	0	0.00	336,118	0.014	610,458	0.06
August	37,787,754	0.98	0	0.00	0	0.00	0	0.00	412,959	0.014	325,692	0.06
September	0	0.00	38,956,197	1.40	0	0.00	0	0.00	365,306	0.013	407,005	0.06
October	0	0.00	34,265,694	1.26	0	0.00	0	0.00	481,627	0.011	246,074	0.06
November	0	0.00	0	0.00	39,143,852	1.55	0	0.00	701,512	0.011	182,758	0.05
December	0	0.00	0	0.00	0	0.00	41,456,384	1.73	634,096	0.007	138,763	0.04
Total	147,988,927	3.75	111,984,516	3.76	109,015,058	4.60	68,611,652	3.41	5,309,021	0.13	3,004,687	0.60

INTANKS includes tanks W84, W101, W105, W116, W117, W123, W124, W128, W134, W152.
Please see detail sheets for throughput and emissions for each tank.

**Kinder Morgan, Linnton Terminal
2002 Monthly and Annual Summary
Emission Units: L-BOILER**

Fuel	Units	PM/PM ₁₀	SO ₂	NO _x	CO	VOC
Residual Fuel Oil	lbs/Mgal	9.19 (%S)+ 3.22	157 (%S)	55	5	0.28
Distillate Fuel Oil	lbs/Mgal	2	142 (%S)	20	5	0.2

Month	Fuel Usage				Monthly Emissions ^(a)				
	Residual Fuel Oil (gallon/month)	Percent Sulfur (%)	Distillate Fuel Oil (gallon/month)	Percent Sulfur (%)	PM/PM ₁₀ (tons/month)	SO ₂ (tons/month)	NO _x (tons/month)	CO (tons/month)	VOC (tons/month)
January									
February									
March									
April									
May									
June									
July									
August									
September									
October									
November									
December									

2002 Totals:	Fuel Usage				Annual Emissions ^(b)				
	Residual Fuel Oil (gallons)	Percent Sulfur (%)	Distillate Fuel Oil (gallons)	Percent Sulfur (%)	PM ₁₀ (tons)	SO ₂ (tons)	NO _x (tons)	CO (tons)	VOC (tons)
	0	(Average)	0	(Average)	0.00	0.00	0.00	0.00	0.00

Notes:

(a) Monthly emission rate = (Fuel usage [gallons/month]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs)

(b) Annual emission rate = (Fuel usage [gallons/year]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs)

Kinder Morgan, Willbridge Terminal
2002 Monthly and Annual Summary
Emission Units: W-BOILER

Fuel	Units	PM/PM ₁₀	SO ₂	NO _x	CO	VOC
Natural Gas	lbs/10 ⁶ ft ³	2.5	2.6	140	35	2.8
Residual Fuel Oil	lbs/Mgal	9.19 (%S) + 3.22	157 (%S)	55	5	0.28
Distillate Fuel Oil	lbs/Mgal	2	142 (%S)	20	5	0.2

Month	Fuel Usage					Monthly Emissions ^(a)				
	Natural Gas (10 ⁶ ft ³ /month)	Residual Fuel Oil (gallon/month)	Percent Sulfur (%)	Distillate Fuel Oil (gallon/month)	Percent Sulfur (%)	PM/PM ₁₀ (tons/month)	SO ₂ (tons/month)	NO _x (tons/month)	CO (tons/month)	VOC (tons/month)
January										
February										
March										
April										
May										
June										
July										
August										
September										
October										
November										
December										

2002 Totals:	Fuel Usage					Annual Emissions ^(b)				
	Natural Gas (10 ⁶ ft ³)	Residual Fuel Oil (gallons)	Percent Sulfur (%)	Distillate Fuel Oil (gallons)	Percent Sulfur (%)	PM ₁₀ (tons)	SO ₂ (tons)	NO _x (tons)	CO (tons)	VOC (tons)
	0	0	(Average)	0	(Average)	0.00	0.00	0.00	0.00	0.00

Notes:

(a) Monthly emission rate = (Fuel usage [gallons/month]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs)

(b) Annual emission rate = (Fuel usage [gallons/year]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs)

**Kinder Morgan, Linnton Terminal
2002 Monthly and Annual Summary
Emission Unit: L-TRACK**

Compound	Vapor Pressure (psia)	Molecular Weight (lb/lb-mole)	Average Temperature (deg R)	VOC Loading Loss ^(a) (lb/10 ³ gal)
Diesel	0.0074	130	513	0.023
Marine Diesel	0.0074	130	513	0.023
Mid-Grade Unleaded	5.20	66	513	8.34
Regular Unleaded	5.20	66	513	8.34
Premium Unleaded	5.20	66	513	8.34
Ethanol	0.60	46	513	0.67

Saturation Factor: 1 (Submerged loading in a dedicated vapor balance service)

Month	VRU Control Efficiency ⁽¹⁾ (%)	Diesel (gallons/month)	Marine Diesel (gallons/month)	Mid-Grade Unleaded (gallons/month)	Regular Unleaded (gallons/month)	Premium Unleaded (gallons/month)	Ethanol (gallons/month)	VOC Emissions ^(b) (tons/month)
January	99.7							
February	99.7							
March	99.7							
April	99.7							
May	99.7							
June	99.7							
July	99.7							
August	99.7							
September	99.7							
October	99.7							
November	99.7							
December	99.7							

	Diesel (gallons)	Marine Diesel (gallons)	Mid-Grade Unleaded (gallons)	Regular Unleaded (gallons)	Premium Unleaded (gallons)	Ethanol (gallons)	VOC Emissions ^(c) (tons)
2002 Totals:	0	0	0	0	0	0	0.00

Notes:

- (a) Calculated rate = ((12.46) X (Saturation factor) X (Vapor Pressure [psia]) X (Molecular Weight [lb/lb-mole]) / (Temperature [deg R]))
- (b) Monthly emission rate = (Throughput [gallons/month]) X (Loading loss emission factor [lbs/10³ gallon]) X (ton/2000 lb) X (1-(control efficiency [%] /100))
- (c) Annual emission rate = (Throughput [gallons/year]) X (Loading loss emission factor [lbs/10³ gallon]) X (ton/2000 lb) X (1-(control efficiency [%] /100))

References:

- (1) The control efficiency was obtained from the June 16-17, 1999 VRU source test.

**Kinder Morgan, Willbridge Terminal
2002 Monthly and Annual Summary
Emission Unit: W-TRACK**

Compound	Vapor Pressure (psia)	Molecular Weight (lb/lb-mole)	Average Temperature (deg R)	VOC Loading Loss ^(a) (lb/10 ³ gal)
Diesel	0.0074	130	513	0.023
Mid-Grade Unleaded	5.20	66	513	8.34
Regular Unleaded	5.20	66	513	8.34
Premium Unleaded	5.20	66	513	8.34
Kerosene	0.0085	130	513	0.027
AvGas	3.50	68	513	5.78
Ethanol	0.60	46	513	0.67

Saturation Factor: 1 (Submerged loading in a dedicated vapor balance service)

Month	VRU Control Efficiency ⁽¹⁾ (%)	Diesel (gallons/month)	Mid-Grade Unleaded (gallons/month)	Regular Unleaded (gallons/month)	Premium Unleaded (gallons/month)	Kerosene/ Jet (gallons/month)	AvGas (gallons/month)	Ethanol (gallons/month)	VOC Emissions ^(b) (tons/month)
January	99.3	4,781,696		11,046,271	731,986	1,399,548	36,925	626,638	0.35
February	99.3	4,816,727		11,703,512	825,637	1,127,460	34,415	583,200	0.37
March	99.3	4,203,620		9,931,721	1,161,635	1,125,719	182,828	178,854	0.33
April	99.3	4,851,865		10,469,113	833,815	825,051	227,747	261,704	0.34
May	99.3	5,153,810		11,423,857	987,507	857,138	238,683	380,355	0.37
June	99.3	5,875,831		11,526,825	1,090,571	866,652	373,299	346,652	0.38
July	99.3	6,399,828		13,747,436	1,335,443	1,164,813	610,458	336,118	0.45
August	99.3	6,980,834		13,391,569	1,421,531	1,416,602	325,692	412,959	0.44
September	99.3	5,960,014		11,922,142	1,093,736	957,329	407,005	365,306	0.39
October	99.3	6,604,402		12,058,088	1,039,930	1,460,448	246,074	481,627	0.39
November	99.3	6,636,709		12,142,277	888,146	1,778,973	182,758	676,012	0.39
December	99.3	4,423,010		11,389,032	809,572	1,260,112	138,763	634,096	0.36

	Diesel (gallons)	Mid-Grade Unleaded (gallons)	Regular Unleaded (gallons)	Premium Unleaded (gallons)	Kerosene/ Jet (gallons)	AvGas (gallons)	Ethanol (gallons)	VOC Emissions ^(c) (tons)
2002 Totals:	66,688,346	0	140,751,843	12,219,509	14,239,845	3,004,647	5,283,521	4.54

Notes:

(a) Calculated rate = ((12.46) X (Saturation factor) X (Vapor Pressure [psia]) X (Molecular Weight [lb/lb-mole]) / (Temperature [deg R]))

(b) Monthly emission rate = (Throughput [gallons/month]) X (Loading loss emission factor [lbs/10³ gallon]) X (ton/2000 lb) X (1-(control efficiency [%] /100))

(c) Annual emission rate = (Throughput [gallons/year]) X (Loading loss emission factor [lbs/10³ gallon]) X (ton/2000 lb) X (1-(control efficiency [%] /100))

References:

(1) Source test of VRU, June 9-10, 1998.

Kinder Morgan, Linnton Terminal
2002 Monthly and Annual Summary
Emission Unit: L-MLOAD

Product	Emission Factors (lbs/Mgal)
Jet Kerosene	0.013
Distillate Oil No. 2	0.012
Residual Oil No. 6	9.00E-05

Month	Jet Kerosene (gallons/month)	Distillate Oil No. 2 (gallons/month)	Residual Oil No. 6 (gallons/month)	VOC Emissions ^(a) (tons/month)
January	0	0	0	0.0000
February	0	0	0	0.0000
March	0	0	0	0.0000
April	0	0	0	0.0000
May	0	0	0	0.0000
June	0	0	0	0.0000
July	0	0	0	0.0000
August	0	1,217,580	0	0.0073
September	0	0	0	0.0000
October	0	820,428	0	0.0049
November	0	0	0	0.0000
December	0	0	0	0.0000

	Jet Kerosene (gallons)	Distillate Oil No. 2 (gallons)	Residual Oil No. 6 (gallons)	VOC Emissions ^(b) (tons)
2002 Totals:	0	2,038,008	0	0.012

Notes:

(a) Monthly emission rate = (Monthly throughput [gallons/month]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs)

(b) Annual emission rate = (Annual throughput [gallons/year]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs)

**Kinder Morgan, Willbridge Terminal
2002 Monthly and Annual Summary
Emission Unit: W-MLOAD**

Product	Emission Factors (lbs/Mgal)
Gasoline	3.9
Jet Kerosene	0.013
Distillate Oil No. 2	0.012
Residual Oil No. 6	9.00E-05

VRU Control Efficiency: 99.3 (%) ⁽¹⁾

Month	Gasoline with VRU (gallons/month)	Jet Kerosene (gallons/month)	Distillate Oil No.2 (gallons/month)	Residual Oil No.6 (gallons/month)	VOC Emissions ^(a) (tons/month)
January	8,564,684	2,035,508	2,107,634	0	0.14
February	8,296,110	635,138	3,170,758	0	0.14
March	15,164,343	0	2,739,455	0	0.22
April	11,731,627	0	3,610,844	0	0.18
May	9,710,488	420,839	5,564,617	0	0.17
June	7,266,891	421,147	6,624,488	0	0.14
July	16,507,047	0	7,068,300	0	0.27
August	13,009,251	0	4,860,411	0	0.21
September	11,849,801	215,040	7,967,998	0	0.21
October	8,770,495	0	5,613,682	0	0.15
November	11,724,001	1,240,740	5,299,198	0	0.20
December	6,560,258	212,378	3,944,867	0	0.11

	Gasoline with VRU (gallons)	Jet Kerosene (gallons)	Distillate Oil No.2 (gallons)	Residual Oil No.6 (gallons)	VOC Emissions ^(b) (tons)
2002 Totals:	129,154,996	5,180,790	58,572,252	0	2.15

Notes:

(a) Monthly emission rate = (Monthly throughput [gallons/month]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs) X (1-(control efficiency [%] /100))

(b) Annual emission rate = (Annual throughput [gallons/year]) X (Emission factor [lbs/Mgallons]) X (Mgallons/1,000 gallons) X (ton/2000 lbs) X (1-(control efficiency [%] /100))

References:

(1) Source test of VRU, June 9-10, 1998.

Kinder Morgan, Linnton Terminal
2002 Monthly and Annual Summary
Emission Unit: L-FGTVOG

Component	Number of Components	Emission Factor (lbs/hour - component)
Liquid Service		
Flanges	1180	2.30E-05
Valves	381	1.50E-04
Open Ended Lines	126	6.50E-03
Pumps (seals)	10	9.30E-04
Loading Arm Valves	12	8.70E-04
Other	46	2.50E-04
Vapor Service		
Flanges	59	6.70E-05
Valves	6	1.60E-04
Open Ended Lines	7	6.70E-03
Pumps (seals)	0	9.30E-04
Loading Arm Valves	8	4.50E-02
Other	1	1.40E-03

Month	VOC Emissions ^(a) (tons/month)
January	0.50
February	0.45
March	0.50
April	0.49
May	0.50
June	0.49
July	0.50
August	0.50
September	0.49
October	0.50
November	0.49
December	0.50

	VOC Emissions ^(b) (tons)
2002 Totals:	5.90

Notes:

(a) Monthly emission rate = (Number of components) X (Emission factor [lbs/hour-component]) X
(24 hours/day) X (days/month) X (ton/2000 lbs)

(b) Annual emission rate = (Number of components) X (Emission factor [lbs/hour-component]) X
(8760 hours/year) X (ton/2000 lbs)

Kinder Morgan, Willbridge Terminal
2002 Monthly and Annual Summary
Emission Unit: W-FGTVOC

Component	Number of Components	Emission Factor (lbs/hour - component)
Liquid Service		
Flanges	1505	2.30E-05
Valves	472	1.50E-04
Open Ended Lines	141	6.50E-03
Pumps (seals)	46	9.30E-04
Loading Arm Valves	57	8.70E-04
Other	126	2.50E-04
Vapor Service		
Flanges	126	6.70E-05
Valves	23	1.60E-04
Open Ended Lines	9	6.70E-03
Pumps (seals)	2	9.30E-04
Loading Arm Valves	6	4.50E-02
Other	0	1.40E-03

Month	VOC Emissions ^(a) (tons/month)
January	0.55
February	0.50
March	0.55
April	0.54
May	0.55
June	0.54
July	0.55
August	0.55
September	0.54
October	0.55
November	0.54
December	0.55

	VOC Emissions ^(b) (tons)
2002 Totals:	6.53

Notes:

(a) Monthly emission rate = (Number of components) X (Emission factor [lbs/hour-component]) X
(24 hours/day) X (days/month) X (ton/2000 lbs)

(b) Annual emission rate = (Number of components) X (Emission factor [lbs/hour-component]) X
(8760 hours/year) X (ton/2000 lbs)

Kinder Morgan, Linnton Terminal
Emission Unit: L-FIXTANK, L-EXTANK, L-INTANK
Gasoline RVP7

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
L2501	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11017	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11019	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17018	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17027	INTANK	0	0	0	0	0	0	0	435,495	0	0	0	0	435,495
L45028	EXTANK	0	0	0	0	0	602,952	167,706	1,113,400	0	0	0	0	1,884,057
L59029	EXTANK	0	0	0	0	851,298	783,090	0	1,446,041	0	0	0	0	3,080,430

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
L2501	INTANK													0.00
L11017	INTANK													0.00
L11019	INTANK													0.00
L17018	INTANK													0.00
L17027	INTANK								164					0.08
L45028	EXTANK						660	742	682					1.04
L59029	EXTANK					621	679		701					1.00
Totals:		0	0	0	0	621	1,339	742	1,547	0	0	0	0	2.12

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Linnton Terminal
Emission Unit: L-FIXTANK, L-EXTANK, L-INTANK
Gasoline RVP10

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
L2501	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11017	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11019	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17018	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17027	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L45028	EXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L59029	EXTANK	0	0	0	1,539,636	0	0	0	0	0	260,610	0	0	1,800,246

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
L2501	INTANK					RVP-9								0.00
L11017	INTANK													0.00
L11019	INTANK													0.00
L17018	INTANK													0.00
L17027	INTANK													0.00
L45028	EXTANK													0.00
L59029	EXTANK				1,283						820			1.05
Totals:		0	0	0	1,283	0	0	0	0	0	820	0	0	1.05

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Linnton Terminal
Emission Unit: L-FIXTANK, L-EXTANK, L-INTANK
Gasoline RVP13

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
L2501	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11017	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11019	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17018	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17027	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L45028	EXTANK	0	0	0	0	0	0	0	0	0	0	139,650	0	139,650
L59029	EXTANK	0	1,472,352	420,924	0	0	0	0	0	0	0	0	0	1,893,276

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
L2501	INTANK													0.00
L11017	INTANK													0.00
L11019	INTANK													0.00
L17018	INTANK													0.00
L17027	INTANK													0.00
L45028	EXTANK											1,382		0.69
L59029	EXTANK		1,474	1,369										1.42
Totals:		0	1,474	1,369	0	0	0	0	0	0	0	1,382	0	2.11

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Linnnton Terminal
Emission Unit: L-FIXTANK, L-EXTANK, L-INTANK
Gasoline RVP15

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
L2501	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11017	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L11019	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17018	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17027	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L45028	EXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L59029	EXTANK	0	0	0	0	0	0	0	0	0	0	0	107,226	107,226

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
L2501	INTANK													0.00
L11017	INTANK													0.00
L11019	INTANK													0.00
L17018	INTANK													0.00
L17027	INTANK													0.00
L45028	EXTANK													0.00
L59029	EXTANK												1,817	0.91
Totals:		0	0	0	0	0	0	0	0	0	0	0	1,817	0.91

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Linnton Terminal
Emission Unit: L-FIXTANK, L-EXTANK, L-INTANK
Ethanol

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
L1033	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2024	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2501	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2502	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2503	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L5004	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L10007	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L17020	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L55008	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L55023	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
L1033	FIXTANK													0.00
L2024	FIXTANK													0.00
L2501	INTANK													0.00
L2502	FIXTANK													0.00
L2503	FIXTANK													0.00
L5004	FIXTANK													0.00
L10007	FIXTANK													0.00
L17020	INTANK													0.00
L55008	FIXTANK													0.00
L55023	FIXTANK													0.00
Totals:		0	0	0	0	0	0	0	0	0	0	0	0	0.00

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Linnton Terminal
Emission Unit: L-FIXTANK, L-EXTANK, L-INTANK
Diesel

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
L1033	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2024	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2501	INTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2502	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L2503	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L5004	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L10007	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L20011	FIXTANK	0	0	0	0	0	0	360,363	394,614	320,252	664,037	229,365	0	1,968,630
L30016	FIXTANK	0	0	887,514	730,205	0	0	0	577,650	468,796	972,041	335,752	0	3,971,958
L55008	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
L55021	FIXTANK	0	0	0	0	632,688	0	977,996	1,070,951	869,138	1,802,145	622,477	1,688,946	7,664,341
L55022	FIXTANK	0	144,858	1,634,670	1,344,931	0	0	971,599	1,063,946	863,453	1,790,357	618,406	0	8,432,220
L55023	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
L1033	FIXTANK													0.00
L2024	FIXTANK													0.00
L2501	INTANK													0.00
L2502	FIXTANK													0.00
L2503	FIXTANK													0.00
L5004	FIXTANK													0.00
L10007	FIXTANK													0.00
L20011	FIXTANK							16	23	18	19	4		0.04
L30016	FIXTANK			23	25				35	27	29	11		0.07
L55008	FIXTANK													0.00
L55021	FIXTANK					41		63	62	48	52	20	31	0.16
L55022	FIXTANK		10	36	29			18	62	19	39	13		0.11
L55023	FIXTANK													0.00
Totals:		0	10	59	55	41	0	97	182	111	138	49	31	0.39

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Gasoline RVP7

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W84	INTANK	0	0	0	0	3,762,147	3,494,378	5,041,741	4,217,050	0	0	0	0	16,515,318
W101	INTANK	0	0	0	0	5,728,220	5,320,517	7,676,522	6,420,853	0	0	0	0	25,146,112
W116	INTANK	0	0	0	0	5,506,483	5,114,562	7,379,366	6,172,304	0	0	0	0	24,172,714
W118	FIXTANK	0	0	0	0	3,658,670	3,398,266	4,903,069	4,101,061	0	0	0	0	16,061,065
W123	INTANK	0	0	0	0	5,299,528	4,922,337	7,102,021	5,940,324	0	0	0	0	23,264,210
W124	INTANK	0	0	0	0	5,580,395	5,183,214	7,478,418	6,255,153	0	0	0	0	24,497,180
W128	INTANK	0	0	0	0	4,065,189	3,775,851	5,447,854	4,556,734	0	0	0	0	17,845,628
W134	INTANK	0	0	0	0	3,769,539	3,501,244	5,051,647	4,225,335	0	0	0	0	16,547,764

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)
W118 ⁽²⁾	FIXTANK					24,357	24,589	35,365	30,163				

VRU Control Efficiency: 99.3 (%)⁽⁴⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W84	INTANK					219	234	249	246					0.47
W101	INTANK					262	280	299	295					0.57
W116	INTANK					253	280	298	295					0.56
W118 ⁽³⁾	FIXTANK					242	244	351	300					0.57
W123	INTANK					253	271	277	286					0.54
W124	INTANK					262	280	299	295					0.57
W128	INTANK					259	277	295	292					0.56
W134	INTANK					219	234	249	246					0.47
Totals:		0	0	0	0	1,968	2,100	2,317	2,255	0	0	0	0	4.32

References:

- (1) Calculated using the EPA TANKS 3.1 program.
- (2) Tank 118 uncontrolled emissions calculated using TANKS 3.1, before control from the Willbridge VRU.
- (3) Tank 118 emissions are controlled by the Willbridge VRU (W-VRU).
Controlled emission rate = (Tank 118 uncontrolled emissions [lbs/month]) X (1 - (control efficiency from VRU [%] / 100))
- (4) Source test of VRU, June 9-10, 1998.

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Gasoline RVP10

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W84	INTANK	0	0	0	4,325,844	0	0	0	0	4,347,447	3,823,994	0	0	12,497,285
W101	INTANK	0	0	0	6,586,502	0	0	0	0	6,619,393	5,822,388	0	0	19,028,283
W116	INTANK	0	0	0	6,331,540	0	0	0	0	6,363,159	5,597,006	0	0	18,291,705
W118	FIXTANK	0	0	0	4,206,862	0	0	0	0	4,227,871	3,718,816	0	0	12,153,549
W123	INTANK	0	0	0	6,093,576	0	0	0	0	6,124,006	5,386,648	0	0	17,604,231
W124	INTANK	0	0	0	6,416,527	0	0	0	0	6,448,570	5,672,133	0	0	18,537,231
W128	INTANK	0	0	0	4,674,292	0	0	0	0	4,697,634	4,132,018	0	0	13,503,943
W134	INTANK	0	0	0	4,334,343	0	0	0	0	4,355,988	3,831,507	0	0	12,521,838

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)
W118 ⁽²⁾	FIXTANK				32,701					41,290	32,692		

VRU Control Efficiency: 99.3 (%) ⁽⁴⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W84	INTANK				276					355	317			0.47
W101	INTANK				331					414	381			0.56
W116	INTANK				331					425	380			0.57
W118 ⁽³⁾	FIXTANK				327					413	327			0.53
W123	INTANK				320					411	368			0.55
W124	INTANK				331					425	380			0.57
W128	INTANK				328					422	378			0.56
W134	INTANK				276					355	318			0.47
Totals:		0	0	0	2,521	0	0	0	0	3,218	2,849	0	0	4.29

References:

- (1) Calculated using the EPA TANKS 3.1 program.
- (2) Tank 118 uncontrolled emissions calculated using TANKS 3.1, before control from the Willbridge VRU.
- (3) Tank 118 emissions are controlled by the Willbridge VRU (W-VRU).
Controlled emission rate = (Tank 118 uncontrolled emissions [lbs/month]) X (1 - (control efficiency from VRU [%] / 100))
- (4) Source test of VRU, June 9-10, 1998.

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Gasoline RVP13

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W84	INTANK	0	3,359,927	4,437,583	0	0	0	0	0	0	0	4,368,389	0	12,165,899
W101	INTANK	0	5,115,803	6,756,634	0	0	0	0	0	0	0	6,651,279	0	18,523,716
W116	INTANK	0	4,917,772	6,495,087	0	0	0	0	0	0	0	6,393,810	0	17,806,669
W118	FIXTANK	0	3,267,513	4,315,528	0	0	0	0	0	0	0	4,248,236	0	11,831,277
W123	INTANK	0	4,732,943	6,250,977	0	0	0	0	0	0	0	6,153,506	0	17,137,425
W124	INTANK	0	4,983,782	6,582,270	0	0	0	0	0	0	0	6,479,633	0	18,045,685
W128	INTANK	0	3,630,570	4,795,031	0	0	0	0	0	0	0	4,720,263	0	13,145,863
W134	INTANK	0	3,366,528	4,446,301	0	0	0	0	0	0	0	4,376,971	0	12,189,800

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)
W118 ⁽²⁾	FIXTANK		31,687	43,130								40,545	

VRU Control Efficiency: 99.3 (%)⁽⁴⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W84	INTANK		376	393								389		0.58
W101	INTANK		450	472								467		0.69
W116	INTANK		450	471								466		0.69
W118 ⁽²⁾	FIXTANK		222	302	0	0	0	0	0	0	0	284	0	0.40
W123	INTANK		435	456								451		0.67
W124	INTANK		450	472								466		0.69
W128	INTANK		448	468								463		0.69
W134	INTANK		376	394								389		0.58
Totals:		0	3,206	3,428	0	0	0	0	0	0	0	3,377	0	5.01

References:

- (1) Calculated using the EPA TANKS 3.1 program.
- (2) Tank 118 uncontrolled emissions calculated using TANKS 3.1, before control from the Willbridge VRU.
- (3) Tank 118 emissions are controlled by the Willbridge VRU (W-VRU).
Controlled emission rate = (Tank 118 uncontrolled emissions [lbs/month]) X (1 - (control efficiency from VRU [%] /100))
- (4) Source test of VRU, June 9-10, 1998.

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Gasoline RVP15

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W84	INTANK	3,030,483	0	0	0	0	0	0	0	0	0	0	4,626,463	7,656,946
W101	INTANK	4,614,193	0	0	0	0	0	0	0	0	0	0	7,044,222	11,658,415
W116	INTANK	4,435,579	0	0	0	0	0	0	0	0	0	0	6,771,543	11,207,121
W118	FIXTANK	2,947,129	0	0	0	0	0	0	0	0	0	0	0	2,947,129
W123	INTANK	4,268,872	0	0	0	0	0	0	0	0	0	0	6,517,042	10,785,914
W124	INTANK	4,495,117	0	0	0	0	0	0	0	0	0	0	6,862,436	11,357,552
W128	INTANK	3,274,588	0	0	0	0	0	0	0	0	0	0	4,999,125	8,273,714
W134	INTANK	3,036,436	0	0	0	0	0	0	0	0	0	0	4,635,553	7,671,989

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)
W118 ⁽²⁾	FIXTANK	30.433											

VRU Control Efficiency: 99.3 (%)⁽⁴⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W84	INTANK	424											435	0.43
W101	INTANK	508											522	0.51
W116	INTANK	508											521	0.51
W118 ⁽³⁾	FIXTANK	213	0	0	0	0	0	0	0	0	0	0	0	0.11
W123	INTANK	491											505	0.50
W124	INTANK	508											522	0.51
W128	INTANK	506											518	0.51
W134	INTANK	424											435	0.43
Totals:		3,582	0	0	0	0	0	0	0	0	0	0	3,458	3.52

References:

- (1) Calculated using the EPA TANKS 3.1 program.
- (2) Tank 118 uncontrolled emissions calculated using TANKS 3.1, before control from the Willbridge VRU.
- (3) Tank 118 emissions are controlled by the Willbridge VRU (W-VRU).
Controlled emission rate = (Tank 118 uncontrolled emissions (lbs/month)) X (1 - (control efficiency from VRU [%] / 100))
- (4) Source test of VRU, June 9-10, 1998.

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Avgas

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W117	INTANK	36,925	34,415	182,868	227,747	238,683	373,299	610,458	325,692	407,005	246,074	182,758	138,763	3,004,687
	CALC.(2)	56,967	56,967											

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W117	INTANK	84	88	89	93	105	112	119	118	110	110	91	85	0.60

References:

- (1) Calculated using the EPA TANKS 3.1 program.
- (2) To calculate lbs. Using the EPA TANKS3.1 program we had to use the gallons the program would accept. INTANK shows actual throughput, CALC.(2) shows what the EPA program would accept.

Avgas same as Gasoline with RVP of 5.5-7 yeararound

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Jet A Fuel

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W2	FIXTANK	3,162,170	3,432,091	3,893,053	3,287,466	3,319,071	3,326,457	3,676,772	4,119,918	3,665,470	3,981,331	3,465,478	3,729,235	43,058,511
W4	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W52	FIXTANK	3,307,536	3,589,865	4,072,018	3,438,591	3,471,649	3,479,374	3,845,793	4,309,311	3,833,972	4,164,353	3,624,786	3,900,669	45,037,917
W64	FIXTANK	0	0	0	0	0	0	0	0	862,073	1,045,563	940,428	1,012,004	3,860,069
W69	FIXTANK	3,235,110	3,511,258	3,982,852	3,363,296	3,395,630	3,403,186	3,761,582	4,214,950	3,250,017	3,284,811	3,545,414	3,815,255	42,763,362
W70	FIXTANK	1,441,641	1,564,698	1,774,852	1,498,763	1,513,172	1,516,539	1,676,249	1,878,280	1,671,096	1,815,098	1,579,919	1,700,167	19,630,474
W71	FIXTANK	849,538	922,054	1,045,895	883,200	891,691	893,675	987,789	1,106,844	984,753	1,069,611	931,024	0	10,566,074
W91	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W92	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W93	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W94	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W95	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W96	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W97	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W98	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W99	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W109	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W110	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W111	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W112	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W113	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W114	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W115	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W141	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W2	FIXTANK	67	84	106	113	133	148	176	184	156	127	89	79	0.73
W4	FIXTANK													0.00
W52	FIXTANK	69	80	108	115	134	147	178	186	155	36	88	81	0.69
W64	FIXTANK									36	34	23	5	0.05
W69	FIXTANK	68	86	108	116	136	151	180	188	145	44	88	81	0.70
W70	FIXTANK	30	38	47	50	59	66	78	82	69	57	38	36	0.32
W71	FIXTANK	18	22	28	30	35	39	46	48	41	11	23		0.17
W91	FIXTANK													0.00
W92	FIXTANK													0.00
W93	FIXTANK													0.00
W94	FIXTANK													0.00
W95	FIXTANK													0.00
W96	FIXTANK													0.00
W97	FIXTANK													0.00
W98	FIXTANK													0.00
W99	FIXTANK													0.00
W109	FIXTANK													0.00
W110	FIXTANK													0.00
W111	FIXTANK													0.00
W112	FIXTANK													0.00
W113	FIXTANK													0.00
W114	FIXTANK													0.00
W115	FIXTANK													0.00
W141	FIXTANK													0.00
Totals:		252	310	397	423	497	551	657	687	601	308	348	282	2.66

References:

(1) Calculated using the EPA TANKS 3.1 program.

Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Diesel

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W4	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W52	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W54	FIXTANK	7,676,076	7,637,396	7,000,146	4,776,974	8,194,971	10,487,754	9,756,850	10,556,162	12,011,866	10,423,859	10,246,121	9,055,497	107,823,673
W91	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W92	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W93	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W94	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W95	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W96	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W97	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W98	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W99	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W100	FIXTANK	7,262,453	7,225,858	6,622,945	4,519,569	7,753,387	9,922,624	9,231,104	9,987,347	11,364,611	9,862,173	9,694,011	8,567,544	102,013,625
W109	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W110	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W111	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W112	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W113	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W114	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W115	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W141	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W4	FIXTANK													0.00
W52	FIXTANK													0.00
W54	FIXTANK	110	124	128	111	191	260	270	283	280	206	166	132	1.13
W91	FIXTANK													0.00
W92	FIXTANK													0.00
W93	FIXTANK													0.00
W94	FIXTANK													0.00
W95	FIXTANK													0.00
W96	FIXTANK													0.00
W97	FIXTANK													0.00
W98	FIXTANK													0.00
W99	FIXTANK													0.00
W100	FIXTANK	105	119	122	107	183	248	259	271	267	197	158	126	1.08
W109	FIXTANK													0.00
W110	FIXTANK													0.00
W111	FIXTANK													0.00
W112	FIXTANK													0.00
W113	FIXTANK													0.00
W114	FIXTANK													0.00
W115	FIXTANK													0.00
W141	FIXTANK													0.00
Totals:		215	243	250	217	374	508	528	553	547	403	324	258	2.21

References:

(1) Calculated using the EPA TANKS 3.1 program.

**Kinder Morgan, Willbridge Terminal
Emission Unit: W-FIXTANK, W-EXTANK, W-INTANK
Ethanol**

2002 Monthly and Annual Throughput Summary

Tank No.	Type of Tank	Jan (gallons)	Feb (gallons)	Mar (gallons)	Apr (gallons)	May (gallons)	Jun (gallons)	Jul (gallons)	Aug (gallons)	Sep (gallons)	Oct (gallons)	Nov (gallons)	Dec (gallons)	2002 Throughput (gallons)
W4	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W91	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W92	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W93	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W94	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W95	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W96	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W97	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W98	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W99	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W105	INTANK	159,731	148,659	45,590	66,709	96,953	88,362	85,677	44,703	93,117	122,768	178,817	0	1,131,087
W109	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W110	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W111	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W112	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W113	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W114	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W115	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W141	FIXTANK	0	0	0	0	0	0	0	0	0	0	0	0	0
W152	INTANK	466,907	434,541	133,264	194,995	283,402	258,290	250,441	368,256	272,189	358,859	522,695	634,096	4,177,934

2002 Monthly and Annual Emissions Summary⁽¹⁾

Tank No.	Type of Tank	Jan (lbs)	Feb (lbs)	Mar (lbs)	Apr (lbs)	May (lbs)	Jun (lbs)	Jul (lbs)	Aug (lbs)	Sep (lbs)	Oct (lbs)	Nov (lbs)	Dec (lbs)	2002 Emissions (tons)
W4	FIXTANK													0.00
W91	FIXTANK													0.00
W92	FIXTANK													0.00
W93	FIXTANK													0.00
W94	FIXTANK													0.00
W95	FIXTANK													0.00
W96	FIXTANK													0.00
W97	FIXTANK													0.00
W98	FIXTANK													0.00
W99	FIXTANK													0.00
W105	INTANK	7	7	7	7	9	9	10	10	9	8	8	0	0.05
W109	FIXTANK													0.00
W110	FIXTANK													0.00
W111	FIXTANK													0.00
W112	FIXTANK													0.00
W113	FIXTANK													0.00
W114	FIXTANK													0.00
W115	FIXTANK													0.00
W141	FIXTANK													0.00
W152	INTANK	12	13	12	13	15	17	18	19	16	15	14	13	0.09
Totals:		19	20	19	19	24	26	28	28	26	23	21	13	0.13

References:

(1) Calculated using the EPA TANKS 3.1 program.